



# Grand Mesa, Uncompahgre and Gunnison National Forests

## Wildlife, Fisheries & Rare Plants

ANNUAL NEWSLETTER

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### The GMUG's Wildlife, Fisheries and Rare Plant Program

This is the first annual newsletter which highlights a few of the accomplishments of the Grand Mesa, Uncompahgre, and Gunnison National Forest (GMUG) Wildlife, Fisheries and Rare Plants (WFRP) Program in fiscal year (FY) 2010, and our plans for 2011.

*The GMUG WFRP mission is to provide favorable ecological conditions to support all native and desired non-native species over the long-term and to promote recovery of federally listed species.*

The GMUG is approximately 3,150,000 acres of which approximately 902,000 acres (30%) is inventoried as roadless and 557,000 acres (19%) is designated wilderness. This is a diverse forest with elevations ranging from 6,500 feet to over 14,000 feet and 12 major types of vegetation communities. Because of this diversity of habitats, our forest supports 74 species of mammals, 274 species of birds, 19 species of fish, 8 species of amphibians, 11 species of reptiles and several thousand species of plants. One federally listed endangered species, four threatened species, one proposed species and two candidate species inhabit the GMUG and are actively managed for recovery.

In 2010, the GMUG biological staff (listed at left) spent approximately 60% of their time on

interdisciplinary teams providing biological input on decisions where National Environmental Policy Act (NEPA) compliance is required. In addition, their time was focused on implementation of other projects identified in the WFRP Strategic Plans.

In FY 2010, Congress appropriated the GMUG \$816,000 for WFRP programs. Of these funds, \$255,000 (31%) was allocated to fisheries/aquatic ecology, \$480,000 (59%) to terrestrial wildlife, and \$81,000 (10%) to rare plants. An additional \$60,000 was received for general inventory and monitoring. By leveraging these funds with our 15 external partners, additional monetary and in-kind contributions were received for WFRP projects.

Annually, each forest is assigned targets for wildlife, fish, and rare plants measured in acres, miles, and tasks/accomplishments. This is one way our efforts to restore, maintain or enhance these species are measured.

The table below shows the WFRP expenditures and accomplishments in FY 2010. Targets can be accomplished with appropriate WFRP funds (core), with funds provided by other Forest Service programs that benefit WFRP resources (integrated) and with projects funded by external partners.

<u>WILDLIFE, FISH, RARE PLANT PROGRAM</u>					
FY 2010 Expenditures					
Program Area	Fish & Aquatic Ecology	Terrestrial Wildlife	Ecology & Rare Plants	Inventory & Monitoring	Totals
Appropriated \$\$\$	\$255,000	\$480,000	\$81,000	\$60,000	\$875,000
Partner (\$\$ or in-kind)	\$54,000	\$78,000			\$132,000
FY 2010 Accomplishments					
CORE	Habitat Improved: 4 mi stream 250 ac lake	Habitat Improved: 2,325 ac	Habitat Inventoried: 1,660 ac	Habitat Inventoried: 26,700 ac 7 Plan Monitoring Questions addressed	
	INTEGRATED	2,744 ac			
PARTNER	3 mi stream 250 ac lake	900 ac			

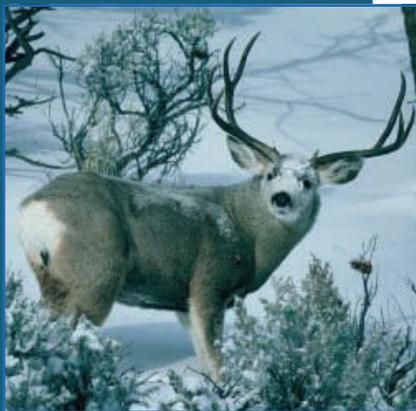


Prescribe fire used to improve big game habitat in Taylor Canyon.

Photo: Matt Vasquez

**“Prescribed fire is our primary tool to increase stand resistance, and restore ecosystem structure and function,”**

**Julie Grode,  
GMUG Wildlife  
Biologist.**



Mule deer foraging on winter range provided by the GMUG.

Photo: Tom Holland

## Over 1,800 acres of habitat enhanced for deer, and elk

Four areas of the GMUG were enhanced for wildlife by prescribed fire to increase stand resistance and restore ecosystem structure and function.

Approximately 300 acres of native ponderosa pine habitat with an understory of assorted brush species (oak, snowberry, serviceberry, etc.) were improved on Pine Mountain on the Uncompahgre Plateau of the Grand Valley Ranger District. A low intensity

under burn was achieved by burning strips of vegetation using hand torches. Burning in this fire dependent ecosystem will increase the stands resistance to wildfire, reduce hazardous fuels, and improve wildlife habitat long-term.

Also in an effort to reduce fire risk and restore ecosystems, approximately 585 acres of pinyon-juniper and gambel oak habitat were burned on the Bear Paw Unit of the Paonia Ranger District. Monitoring

will be done in FY 2011 to determine vegetative response and wildlife use of the area.

Approximately 975 acres in the Columbine Area of the Norwood Ranger District were burned to improve gambel oak habitat, open the overstory, and allow other native vegetation to grow. One year after the burn, biologists observed regeneration of aspen and observed elk browsing in the area.

## Rejuvenating bighorn sheep and elk habitat in the Gunnison Basin

A long-term habitat improvement project is underway for both bighorn sheep and elk habitat in the Taylor Canyon area below Taylor Park Reservoir. Prescribed burning has been ongoing in the area since 1983. Prescribed burning with minor mechanical treatments are planned each year for the next 15 to 20

years throughout a 20,000 acre area. This is part of a larger integrated approach developed with Forest partners to rejuvenate big game habitat in the Gunnison Basin. The primary objectives of this project are to increase carrying capacity of big game winter and transitional ranges; open up historic migration

routes for bighorn sheep; improve the distribution and quality of the big game habitat in the area; and create more natural distributions of plant species and in different age classes.

This project is now in its second year of implementation. Approximately 50 acres were burned in 2010.

## Deer and elk winter forage gets a boost on public lands near Paonia

Deer and elk winter forage is being improved through mechanical treatment of vegetation and prescribed fire on 300 acres south of Paonia.

The Lamborn Wildlife Habitat Improvement Project is designed to improve winter range to keep deer and elk on public lands and keep them off nearby private lands where they are damaging crops and fences as well as suffering vehicle collisions. Additionally, the treatments will help protect the Paonia city water

supply infrastructure and the town from catastrophic wildfire. The project is in oak/serviceberry and associated shrublands, as well as, pinyon-juniper woodlands.

After the units were hydro-axed and roller-chopped (mechanical treatments) earlier in the fall of 2009, a grass seed mix purchased by the North Fork Habitat Partnership Program Committee was spread over treated juniper stands to supplement the existing seed

bank and hopefully improve revegetation success.

The area showed substantial regrowth of grasses and forbs, due to the existing seed bank, supplemental seeding, re-sprouting of oaks, and a wet spring and late summer rains. Additionally, a lightning fire in one of the treated units only burned one-tenth acre in three days because of the effectiveness of the treatment. More mechanical treatments and monitoring are planned in 2011.

### Stream simulation culvert enhances high quality aquatic habitat

Aquatic habitat along Los Pinos Creek was improved by reconstructing a stream channel to mimic natural stream bed conditions. An open-bottom multi-plate pipe arch wide enough to accommodate at least a bankfull event was installed on the road and approximately 200 feet of new channel was

reconstructed between the natural channel and the new pipe arch location. The newly reconstructed channel conforms to natural channel characteristics as measured along stable portions of the creek. Stream water elevation was maintained to protect wetlands that formed

upstream of the old pipe due to beaver activity. The open-bottom pipe arch culvert provides aquatic organism passage to an additional 7 miles of high quality habitat in Los Pinos Creek and maintains wetland habitats upstream of the old culvert.



(above) One of four natural fish barriers in Dominguez Creek allowing for incremental treatments to remove rainbows and re-establish cutthroat trout. (See article on Page 4). Photo: Matt Dare

(below) Installation of an open bottom multi-plate pipe arch to provide aquatic organism passage to high quality stream habitat and protect upstream wetlands.

Photo: Clay Speas



(above) A new “fish-friendly” diversion structure was installed in Fillmore Ditch to reduce fish entrainment and mortality of Colorado River cutthroat trout.

Photo: Matt Dare

### Fish-friendly structure installed by Bear Ranch, LLC

Trapped fish in the Fillmore Ditch was identified as a source of as much as 6% of annual mortality to the population of Colorado River cutthroat trout (CRCT) residing in Deep Creek. The existing diversion structure was replaced with a “fish-friendly” design using Fish and Wildlife Service funds received from a grant from the

Colorado Fish and Wildlife Conservation Office. The structure, designed by a Natural Resource Conservation Service engineer, is constructed of steel and screened to allow water to enter the diversion ditch while preventing fish larger than 150 mm from entering the ditch. The structure was fabricated and

installed by Bear Ranch personnel in October 2010. Bear Ranch is the primary water right holder for the Fillmore Ditch. The new structure should eliminate nearly all the annual mortality associated with entrainment of CRCT into this ditch.



Colorado River Cutthroat trout.

“Replacement of culverts with those simulating natural stream conditions provide aquatic organisms passage to an additional 7 miles of stream in 2010,” Clay Speas, WFRP Program Lead.



Biologists measure Dominguez Creek stream habitat.

Photo: Matt Dare

## Restoring watersheds for native cutthroat trout

Through the Collaborative Forest Landscape Restoration Program (CFLRP), multi-year funding has been awarded to the GMUG to conduct landscape-level restoration of several watersheds on the Uncompahgre Plateau in western Colorado.

One of the goals of the effort is to restore cutthroat trout in a large and continuous segment of stream habitat, increasing occupied habitat on the Forest.

The Dominguez Creek watershed, located between Delta and Grand Junction, Colorado, has approximately 16 miles of perennial stream that currently supports a population of non-native rainbow trout. This trout population will be removed prior to the reintroduction of cutthroat trout.

Stream habitat within the Dominguez Creek watershed was inventoried using R1/R4 stream habitat inventory

protocols.

The inventory helped to develop a comprehensive picture of the quality and quantity of stream habitat available to cutthroat trout upon restoration.

This habitat inventory is being used to develop a cutthroat trout introduction plan with a goal of reestablishing a meta-population of cutthroat trout in this watershed.

## Two rare plants species located on the GMUG

Forest Service Botanist, Barry Johnston, surveyed suitable habitat for two threatened and endangered plant species: *Sclerocactus glaucus* and *Phacelia submutica*.

Within approximately 980 acres surveyed on the Gunnison Ranger District, 26 new populations of *Phacelia*

*submutica* were discovered with an estimated 3,750 plants.

Approximately 80 *Sclerocactus glaucus* plants are estimated to occur in two populations located in 680 acres of suitable habitat surveyed on the Grand Valley Ranger District in 2010.



*Sclerocactus glaucus*, a TES plant species, occurs on the GMUG. Photo: Barry Johnston



11 colonies of the Uncompahgre Fritillary Butterfly occur on the GMUG.

## Uncompahgre Fritillary Butterfly long-term monitoring

The Uncompahgre fritillary butterfly (*Boloria arcnema*) is a small endangered butterfly existing at high elevations in the San Juan Mountains of Colorado. There are a total of 11 documented colonies spread across Redcloud Peak, Uncompahgre Peak, Montezuma Peak, Summit Peak, and Baldy Chato.

Under the recovery plan for this butterfly, populations have been monitored annually for the past 10 years through a cooperative effort between Fish and Wildlife Service, Western State College, San Juan National Forest, Rio Grande National Forest, and the GMUG National Forests. Monitoring in 2009 and 2010 indicated population persistence at eight of the 11

documented colonies.

Butterfly numbers were below historic levels. Causes of the decline are largely unknown, but attributed primarily to natural population fluctuations. Recreational traffic, wild and domestic ungulates and climate change have all been identified as potential threats to the species. Population monitoring will continue in 2011.

## Habitat treatments evaluated for Gunnison sage-grouse

The Gunnison Ranger District biological staff completed the first year of a Gunnison sage-grouse habitat monitoring study to determine if nesting and brood-rearing habitat conditions across burned and unburned (control) landscapes are meeting the habitat guidelines as outlined in the Rangewide Conservation Plan for Gunnison Sage-grouse. Line transect sampling and

Daubenmire plots were used to collect data within a 2,000 acre study area on Flat Top Mountain. Data collected includes cover extent and heights of graminoids, forbs, and shrubs; canopy cover of shrubs, species composition in plant community types and sage-grouse habitat types (lek, brood-rearing, riparian, nesting, summer), aspect, slope, elevation, soil type, and

annual precipitation.

The results of this project will provide guidance for future habitat treatment projects. In 2011, a final report analyzing the first year of data collection will be completed and submitted to our partners, including the Gunnison Basin Habitat Partnership Program and the Gunnison Sage-Grouse Mitigation Committee.



Courtship display of Gunnison Sage-grouse. Photo: CDOW

## Rocky Mountain bighorn sheep habitat selection monitored

Through a cooperative project between the Forest Service, Ouray District grazing permittees, and the Colorado Division of Wildlife, seasonal use patterns and habitat distribution of Rocky Mountain bighorn sheep and domestic sheep grazing in Game Management Unit S-21 near

Ouray, Colorado were mapped to assess the potential for interactions, and to possibly model grazing selection within the grazing allotment.

In 2011, bighorn sheep and domestic sheep will be tracked with GPS collars to determine how wild sheep select habitat

and where domestic sheep are herded across the landscape.

The goals of this project are to improve domestic sheep management to sustain a healthy wild sheep population, reduce interactions between wild and domestic sheep and identify future habitat projects.

*“Our goal is to determine desired habitat conditions for Gunnison sage – grouse and re-create those conditions through management,”*  
**Matt Vasquez,**  
**GMUG Wildlife Biologist.**

## Fen inventory and monitoring

Since 2008, the GMUG has been engaged in various on-going fen management efforts, including inventory and evaluation, monitoring, restoration and research. For the purpose of this work, the GMUG has adopted a working definition of a fen to be “a wetland which accumulates peat as evidenced by presence of 30 cm or greater of peat depth.”

The fen team consisting of a

botanist, a geologist and a soil scientist developed a broad-scale inventory approach, field inventory protocol, and condition evaluation methodology.

The team has field verified 273 individual locations (107 or 39% of which were actually fens), monitored four fens for management effects, participated in three fen restoration projects, and developed a set of proposals

for research.

Desired outcomes for the inventory are estimates of the numbers of fens, their areal extent, the natural circumstances of their occurrence on the GMUG, and an evaluation of effects that current land management activities have on fens.



Ironton Fen, near Red Mountain Pass, Ouray Colorado. Photo: Warren Young



Canada lynx on the Gunnison Ranger District. Photo: Mike Jackson

*“The goal of the North Rim Landscape Working Group is to make informed decisions through a shared science and knowledge base amongst our partners” Dennis Garrison, GMUG Wildlife Biologist.*

### North Rim Landscape Strategic Plan

The North Rim Landscape Strategy Group, a multi-agency and multi-partner working group, was created to collaboratively develop land use management strategies at the landscape scale.

The group hopes to build a shared science and knowledge base for informed decision-making on resource issues across jurisdictional bounda-

ries on the north rim of the Black Canyon of the Gunnison River.

Populations of important wildlife species and their ecology are often tied together across large landscapes. Cohesive management strategies will provide broader improvements and greater resource benefits.

In FY10, the group completed the strategy document describing the landscape, its issues, and methods for managing that landscape.

The group continues to update information, seek funding, and address broad landscape issues in the area.

Information is available to the public, through their website ([www.northrimlandscapestrategy.org](http://www.northrimlandscapestrategy.org)).

### Collaborative Forest Landscape Restoration Program

In 2010 the GMUG received one of ten Collaborative Forest Landscape Restoration Program (CFLRP) grants awarded nation-wide. This grant will implement restoration efforts on the Uncompahgre Plateau where the biologists have completed NEPA compliance on a decision to treat approximately 50,000 acres across

multiple vegetation types. Projects were designed to achieve multiple benefits to wildlife and fisheries habitat. In 2010, over one million dollars of CFLRP grant, external partner, and appropriated Forest Service funding was expended on the project. These funds accomplished 3,300 acres of mechanical and prescribed fire

treatments, 11.5 acres of watershed improvement, over 20-25 miles of road decommissioning, and weed treatments with re-planting of native grasses on over 9,200 acres.

Local stakeholders developed and initiated a multi-party monitoring effort to evaluate the effects of the treatments.

### Implementation of Travel Management



Gates are frequent used for motorized route closures to enhance wildlife habitat on the GMUG. Photo: C. Grother

Motorized travel closures on approximately 30 miles of routes within the Ouray, Grand Valley and Paonia Ranger Districts were implemented with funding from eight budget line items (BLI), including wildlife. Most routes were closed by placement of signs or gates, obscuring the entrance, or obliteration of the roadbed. The goal is to achieve full implementation of the

Uncompahgre Travel Plan by 2013, which will require the closure of an additional 80 miles of motorized routes currently open to travel.

These actions will enhance big game summer and winter range on approximately 3,000 acres of habitat. Closures to improve habitat for Gunnison sage-grouse on the southwest side of the Uncompahgre Plateau is a major emphasis of the effort. The Gunnison and

Paonia Ranger Districts also signed a travel management decision to close approximately 600 miles of currently open motorized routes in the Gunnison Basin and the North Fork. The objective of most route closures is to improve wildlife habitat and watershed resources. Implementation of the Gunnison Travel Decision will begin in 2011 and is estimated to take approximately 5 years.

## Inaugural Moose Day on the Grand Mesa a success!

The Forest Service hosted the first and extremely successful Grand Mesa Moose Day in July, at the Grand Mesa Visitor Center.

A standing room-only crowd of visitors celebrated and learned more about the estimated 150 moose that now thrive on the Grand Mesa. The all-day event included presentations describing the history of moose on the Mesa, moose

viewing and safety, moose biology and the re-introduction program. Kids enjoyed a nature hike where they learned to recognize moose scat, how to track moose with collars, and participated in a scavenger hunt.

Biologists estimate that the habitat on the Grand Mesa can support about 450 moose. Moose Day sponsors include the Colorado Division of

Wildlife, the Grand Mesa Scenic and Historic Byway, the Grand Mesa Merchants Group, the Moose 100.7 radio station and the GMUG.

The funding for the moose transplants and the education efforts came from the Colorado Chapter of Safari Club International and hunters through hunting license fees.



About 150 moose occur on the GMUG. Photo: Dennis Garrison

## Internship program for high school students underway

Through a grant from the Uncompahgre Collaborative Forest Landscape Restoration Project (CFLRP), the Forest initiated a program involving high school students from Montrose High School and other partners in a multi-party monitoring effort among scientists from Colorado State University Collaborative Forest Restoration Institute. The students helped install 18

half-acre plots in mixed conifer and ponderosa pine stands. These stands are being treated through a stewardship contract to restore vegetation communities to achieve historic range of variability (HRV) conditions. Other vegetation types will be added in 2011.

Involvement of high school students will be expanded to include Delta High School

through an apprenticeship in a science and engineering program in 2011. The focus of the Delta High School students in 2011 will be to monitor the response of riparian areas and stream channel conditions resulting from changes in livestock management in upper Dominguez Creek on the Uncompahgre Plateau.

*“Moose sightings are becoming more common on the Grand Mesa. They are fun animals to watch and people just love them”*  
**Trina Romero,**  
**CDOW Watchable Wildlife**  
**Coordinator.**

## Efforts taken to minimize invasive species in Taylor Reservoir

Taylor Reservoir has been identified as a water body at "high risk" for contamination by invasive quagga and zebra mussels. The GMUG entered into an agreement with the Colorado Division of Wildlife to establish a boat-inspection program at the Taylor Park Marina with the objective of preventing the introduction of invasive mussels to the reservoir.

Inspections and decontamination occurred as boats entered and left Taylor Reservoir. Anglers and other recreationists were also informed about invasive mussels and the benefits of maintaining clean watercraft. Nine informational signs were installed around the reservoir, informing anglers and boaters that watercraft inspections

were required prior to launching. The aim was to decrease the frequency of watercraft launching from areas other than the Taylor Reservoir Marina and to provide the public with rules associated with launching watercraft. The boat inspection program will continue indefinitely.



Fisheries biologists installed signs notifying boaters of inspections prior to launching. Photo: Clay Speas

## Our plans for 2011

- Wildlife**
- Continue 3,200 acres of mechanical or prescribed burn treatments; Much of this is associated with the Collaborative Forest Landscape Restoration Project,
  - Improve 9,000 acres of wildlife habitat through motorized route closures,
  - Develop a candidate conservation assessment for Gunnison sage-grouse in cooperation with Fish and Wildlife Service, Colorado Division of Wildlife and Bureau of Land Management,
  - Continue bighorn/domestic sheep study in cooperation with CDOW and the Ouray District grazing permittees,
  - Implement area travel closures to benefit bighorn sheep critical winter range,
  - Implement seasonal closures to benefit Gunnison sage-grouse on Flattop Mountain,
  - Continue multiple conservation education programs with local schools and groups,
  - Sign and inventory cave and mine adits identified in the CDOW White-nose Syndrome Strategic Plan,



A high school intern reviews field methods with volunteers. Photo: Pam Motley

- Fish**
- Remove brook trout in Woods Lake and its tributaries and re-establish pure strain cutthroat populations in these waters (CDOW and Trout Unlimited cooperators),
  - Construct a fish barrier in Deep Creek in cooperation with Bear Ranch to prevent upstream movement of non-native trout into a conservation population of cutthroat trout,
  - Complete NEPA compliance for the Dominguez Creek cutthroat translocation project (scheduled for 2013),
  - Initiate riparian improvement projects on upper Dominguez Creek,
  - Install new stream crossings at five road locations to provide for aquatic organism passage and floodplain function. Funds provided through Federal Highways and Rural Secure Schools Acts,
  - Launch a science and engineering apprenticeship program at Delta High School (funded through a CFLRP grant) and continue Forest Service/Uncompahgre Project intern program with Montrose High School,
  - Initiate a stream temperature monitoring program to track changes in water temperature associated with climate change,
  - Continue to fund boat inspection for aquatic nuisance species (ANS) at Taylor Reservoir and conduct ANS monitoring on the Grand Mesa,

- Rare**
- Complete Fen Inventory Report,
- Plants**
- Continue sensitive plants surveys,
  - Continue multi-party monitoring on the Uncompahgre Plateau,
  - Develop a riparian evaluation scorecard.

*Our Partners are integral to the success of these projects!*

**We gratefully recognize and acknowledge our many partners whose contributions and efforts are invaluable to us in successfully fulfilling our mission.**

**Bear Ranch, LLC**

**Bureau of Land Management**

**Colorado Breeding Bird Survey**

**Colorado Division of Wildlife**

**Gunnison Basin Habitat Partnership Program**

**Gunnison County**

**Gunnison Sage-grouse Conservation Trust Fund**

**Habitat Partnership Program**

**Mule Deer Foundation**

**National Audubon Society**

**National Park Service**

**Natural Resources Conservation Service**

**North Fork Habitat Partnership Program**

**North Rim Landscape Working Group**

**Ouray Grazing Permittees**

**Rocky Mountain Elk Foundation**

**U.S Fish and Wildlife Service**

**Uncompahgre Plateau Project**

**Western State College**

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